

## APPARATUS AND METHOD FOR FEED-FORWARD IMAGE REJECTION IN A RECEIVER

### ABSTRACT OF THE DISCLOSURE

A receiver portion includes a bandpass filter (e.g. SAW filter) that performs channel selection from an input signal having a plurality of channels, and an image cancellation circuit that is in parallel with the bandpass filter. The bandpass filter performs channel selection to select a desired channel that falls in a passband of the bandpass filter. Since the passband is typically a few channels wide, the image channel falls outside the passband and is attenuated by the stopband attenuation of the bandpass filter. The image cancellation circuit includes an attenuator and a phase shifter. The attenuator is configured to have the same attenuation as the stopband attenuation of the bandpass filter at the image channel frequency, and phase shifter is configured to provide a phase shift of approximately 180 degrees. Therefore, the image cancellation circuit has an output that is equal in amplitude, but opposite in phase, to that of the bandpass filter at the image channel frequency. A summer combines the output of the image cancellation circuit with the bandpass filter output to further suppress the image channel frequency over that achieved by the bandpass filter alone.